

The angles of the channel walls are now defined with more precision, with reference to a more precisely defined plane and center axis of the disc. Given the shape of a disc, it is plain that the center line of a disc is the line that passes through the two flat sides of the disc at the radial midpoint of the disc. That center axis is clearly a line that is parallel to the surfaces defining the circumference of the disc, i.e., the edge of the disc. This amendment should preclude any confusion of what is meant by center axis, and is clearly supported by the inherent geometry of a disc.

The orifices are now more precisely defined, in terms of the parallel walls which define them and the angles of said parallel walls with respect to the channel walls through which they pass. Support for the present definition can be found in e.g., Figure 2, wherein the parallel walls which define the orifices can be seen, as can the angle  $\beta$  which those walls form with respect to the sidewall through which the orifices pass.

The disc planes are also more precisely defined, as planes which are perpendicular to the center axis of the disc; the center axis itself being more precisely defined, as discussed above. The disc planes, as now described, have inherent support in the discs themselves; as the planes, as now defined, are clearly inherent reference points within or on the discs.

Accordingly, no new matter is entered.

In view of the above amendments and remarks, it is believed that Claims 1-15

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and 17-22 are now in condition for allowance. Reconsideration of said claims by the Examiner is respectfully requested and the allowance thereof is courteously solicited.

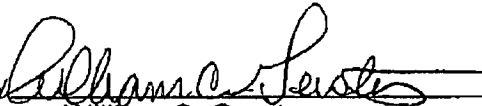
CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,  
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Date March 21, 2002

**MARKED-UP COPY OF AMENDED PARAGRAPHS  
SHOWING CHANGES RELATIVE TO PREVIOUS VERSIONS**

Page 4, paragraph starting at line 13 (amended):

This object is achieved by means of a disc-shaped one piece static mixer module with a multiplicity of orifices, which is structured on its front and rear sides by means of channels, the channels being defined by channel walls and the orifices [terminating in the flanks of the channels on the front and rear sides] passing through the channel walls. The channels on the front side of the module are designated below as inlet channels and the channels on the rear side as mixing channels. Preferably, a plurality of mixer modules are arranged one behind the other in order to improve the mixing action. The orifice cross sections may have any desired geometry. They may, for example, be square or circular. The orifices are preferably arranged so as to be distributed in one or more rows [over the flank surface] on the channel walls.

Page 4, paragraph beginning at line 27 (amended):

The [spacing] distance between the [outer boundary of the front side and that of the rear side of the mixer module] planes which lie across and touch the highest elevations, in the direction of the center axis of the disc shaped module, of front side and the rear side of the disc shaped module, and which are perpendicular to

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the center axis of the disc shaped module is designated, here, as the axial length of the module. The foregoing planes are hereinafter referred to as disc planes.

Page 5, first paragraph, please cancel.

Page 5, paragraph beginning at line 17 (amended).

The orifices in the [flanks] channel walls of the mixer module are usually made in such a way that they are defined by parallel walls which are approximately perpendicular to the channel walls through which they pass [their mid-axis or their wall is approximately perpendicular to the plane of the flanks of the channels. The mid-axis or the wall of the orifices in the flanks or channels] The parallel walls of the channels may, however, also form an angle  $\beta$  of  $\pm 30$  degrees to the [flank plane] channel walls.

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**MARKED-UP COPY OF AMENDED CLAIMS  
SHOWING CHANGES RELATIVE TO PREVIOUS VERSION**

Claim 2 (three-times amended).      Static mixer module according to Claim 1, wherein the inlet channels, the mixing channels, or both, have straight channel walls which are at an angle  $\alpha$  of 5 degrees to 85 degrees to the plane which is perpendicular to the center axis passing through the radial center of the disc, said center axis being parallel to the surfaces defining the circumference of the disc [defined by the circumference of the disc], on the front side of the disc, [of the plane defined by the circumference of the disc,] on the rear side of the disc or both.

Claim 3 (three-times amended).      Static mixer module according to Claim 1, wherein the walls of the inlet channels, of the mixing channels or both are straight and are at an angle  $\alpha$  smaller than 15 degrees to the plane which is perpendicular to the center axis passing through the radial center of the disc, said center axis being parallel to the surfaces defining the circumference of the disc [defined by the circumference of the disc], on the front side, [to the plane defined by the circumference of the disc,] on the rear side, or both, and wherein the mixer module has additional spacer contours on the front side, the rear side, or on both.

Claim 4 (three-times amended).      Static mixer module according to claim 1, wherein the [center-lines] orifices are defined by parallel walls and the parallel

walls of the orifices form angles  $\beta$  defining  $\pm 30$  degrees to the walls through which they pass.

Claim 8 (three-times amended). Static mixer module according to claim 6, wherein the regions or segments are arranged concentrically about the radial center point of the mixer module.

Claim 9 (three-times amended). Static mixer module according to claim 6, wherein the [spacing] distance between the planes which lie across and touch the highest elevations, in the direction of the center axis of the disc shaped module, said center axis being parallel to the surfaces defining the circumference of the disc [plane defined by the circumference of the disc], on the front side, [and the plane defined by the circumference of the disc, on] and the rear side of the mixer module is different in the various regions or segments.

Claim 17 (three times amended). Mixer arrangement according to claim 22, wherein the arrangement of the module and of the static mixer is designed in such a way that the static mixer terminates flush with either the plane which lies across and touches the highest elevations, in the direction of the center axis of the disc shaped module, said center axis being parallel to the surfaces defining the circumference of the disc [either the plane defined by the circumference of the disc, on the front side of the segments or regions or the plane defined by the circumference

of the disc, on the rear side of the segments or regions, said plane having the maximum spacing from the other] on the front side or the rear side of the disc shaped module.

Claim 22 (three-times amended). Mixer arrangement according to claim 12, comprising at least one module which is divided into two or more regions or segments each of which has different spacings between the orifices or different sizes of orifices, and wherein the [spacing] distance between the [plane] planes which lie across and touch the highest elevations, in the direction of the center axis of the disc shaped module, said center axis being parallel to the surfaces defining the circumference of the disc [defined by the circumference of the module], on the front side and [the plane defined by the circumference of the disc,] on the rear side of the module is different in the various regions or segments, said module being followed directly by a static mixer element or a disc-shaped static mixer module adapted to [engage] nest with [into a void defined by the boundaries of] the module.

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